

Prof. Fobes's edition of the *Meteorology* is designed purely as a contribution to classical scholarship. To the meteorologist and the student of meteorological history it will be interesting primarily as furnishing an authoritative Greek text resulting from the careful collation of all existing manuscript material, and secondarily as supplying, through its nearly exhaustive "index verborum," a better concordance to Aristotle's work than has hitherto been available. The introduction and footnotes deal exclusively with textual matters, especially *variæ lectiones*.

The typography—a delight to the eye—reflects the highest credit on the Harvard University Press.—*C. F. Talman.*

LORD RAYLEIGH, METEOROLOGIST.*

[1842-1919.]

The death of Lord Rayleigh, June 30, 1919, was a loss to the human race. For half a century he continuously added, in a measure that few have ever equaled, to our knowledge of nature, and thereby profoundly benefited every civilized being, not alone of his own day and generation but alike of all time to come. Modern industry, modern prosperity, and indeed all that constitutes modern civilization, rest in large measure on the work of only a few men of transcendent genius, and of these Lord Rayleigh was one of the greatest.

His hundreds of papers cover nearly every field of physics; and many of them also extend far over into the realms of other sciences. It is two groups of these papers of double or, rather, of multiple interest that are the special occasion for this note, namely, those that concern the light of the sky, and those that deal with the composition of the atmosphere.

Sky colors.—The fact that the sky usually is blue, but occasionally violet, green, yellow, or red, has of course been known since there were eyes to see, or at least since eyes first became color sensitive. Many ingenious speculations were offered in explanation of these phenomena, but each was a worse failure, if possible, than its hopelessly inadequate predecessor, until in 1871 Lord Rayleigh explained them so completely and so clearly that the problem was at once, and still is, regarded as solved in all essentials.

*Sky polarization.*¹—It had also long been known that the light of the sky was partially polarized according to certain more or less definite laws, but this too was without explanation until Lord Rayleigh in his masterly paper on sky colors showed how, why, and to what extent, the light of the cloudless sky must always be polarized.

Composition of the atmosphere.—For more than a generation it has been confidently believed that the composition of the atmosphere was known even to mere traces, when in 1892 Lord Rayleigh showed that his belief was not well founded. He first showed that the "nitrogen" of the air was not the same as the nitrogen of chemical compounds; and then, working jointly with Ramsay, soon separated from the atmosphere a hitherto unknown gas, argon, that amounts to nearly 1 per cent of the whole by volume, and much more than 1 per cent by weight.

A quantity, therefore, of decided importance since its 200 pounds for every square yard of the earth's surface is perhaps twice as great as the average amount of water vapor.

The stimulus of the discovery of argon led at once to a searching examination of the atmosphere, and the discoveries in it of several other gases of the argon, or inert, family—helium, neon, krypton, and xenon.

Other studies.—In addition to the above three fundamental contributions to meteorology, Lord Rayleigh also made important additions to our knowledge of the vibrations of the atmosphere as a whole, with their relation to certain barometric changes; of stellar scintillation; of atmospheric refraction; and of the dynamics of revolving fluids.

These, then, are the many and more than sufficient reasons for writing "Lord Rayleigh, meteorologist."—*W. J. H.*

RICHARD H. CURTIS.

[1847-1919.]

By the death of Mr. Richard H. Curtis on May 21 meteorology has lost one who took a keen interest in its various branches for more than half a century. Mr. Curtis entered the meteorological department of the board of trade under Admiral FitzRoy in 1861. For a long time he prepared for the press the results of the work of observatories, and in 1907 he became superintendent of the instruments and observatories division of the office. * * * He retired from the meteorological office in 1912 at the age of 65, but continued to supply anemometric records to the office and rainfall records to Symons's Meteorological Magazine until a few months ago. * * * Mr. Curtis contributed many papers to the [Quarterly] Journal [of the Royal Meteorological Society] on various subjects, and especially on sunshine and wind force. He introduced an improvement in the mounting for the lens and bowl of the Campbell-Stokes sunshine recorder, and carried out interesting experiments on the distribution of wind pressure upon flat surfaces. He also aided in working up the atmospheric effects of the Krakatoa eruption of August, 1883, the results of which were incorporated in the report by the Royal Society.—*Nature (London), May 29, 1919, p. 250.*

UNIFICATION OF THE ASTRONOMICAL WITH THE METEOROLOGICAL DAY.

"It is announced that in the Nautical Almanac for 1925, the day is to be considered as beginning at midnight so as to make the astronomical day agree with the civil day. * * *

"It appears that this step is being taken chiefly in the interests of seamen but meteorologists will also welcome it because the agreement thus achieved between the astronomical and the meteorological day removes the possibility of confusion in stating the dates of observations. For many years the observers in astronomical observatories have used the two systems side by side but earlier records are to be found in which meteorological events are reckoned by astronomical time."—*Meteorological Office Circular 36, June 2, 1919, p. 1.*

* Three other obituaries, are published in *Nature (London)*, July 10, 1919, pp. 365-369.

¹For an excellent review of Lord Rayleigh's papers on the color and polarization of sky light, see *MONTHLY WEATHER REVIEW*, Sept., 1900, 28:382.